

# 7724/14GT8

## Twin Diode—High-Mu Triode

9-PIN MINIATURE TYPE  
For Mobile-Communications Equipment

### GENERAL DATA

#### Electrical:

Heater Characteristics and Ratings (*Design-Maximum Values*):

Voltage (AC or DC) . . . . . 14.0<sup>a</sup> volts

Current at heater volts = 14.0 . . . . . 0.150 amp

Peak heater-cathode voltage (Each unit):

Heater negative with  
respect to cathode . . . . . 200 max. volts

Heater positive with  
respect to cathode . . . . . 200<sup>b</sup> max. volts

Direct Interelectrode Capacitances:<sup>c</sup>

*Triode Unit:*

Grid to plate . . . . . 1.8  $\mu\text{f}$

Grid to cathode and heater . . . . . 1.6  $\mu\text{f}$

Plate to cathode and heater . . . . . 0.24  $\mu\text{f}$

*Diode Units:*

Diode-No.1 plate to triode grid . . . . . 0.09 max.  $\mu\text{f}$

Diode-No.2 plate to triode grid . . . . . 0.07 max.  $\mu\text{f}$

Either diode cathode to all other  
tube electrodes . . . . . 6.5  $\mu\text{f}$

Diode plate to cathode and heater  
(Each unit) . . . . . 2.4  $\mu\text{f}$

**Characteristics, Class A<sub>1</sub> Amplifier (Triode Unit):**

Plate Voltage . . . . . 250 volts

Grid Voltage . . . . . -3 volts

Amplification Factor . . . . . 72

Plate Resistance (Approx.) . . . . . 72000 ohms

Transconductance . . . . . 1000  $\mu\text{mhos}$

Plate Current . . . . . 0.7 ma

#### Mechanical:

Operating Position . . . . . Any

Type of Cathodes . . . . . Coated Unipotential

Maximum Overall Length . . . . . 2-3/16"

Maximum Seated Length . . . . . 1-15/16"

Length, Base Seat to Bulb Top (Excluding tip) . . . . . 1-9/16"  $\pm$  3/32"

Diameter . . . . . 0.750" to 0.875"

Dimensional Outline . . . . . See *General Section*

Bulb . . . . . T6-1/2

Base . . . . . Small-Button Noval 9-Pin (JEDEC No.E9-1)



RADIO CORPORATION OF AMERICA  
Electron Tube Division

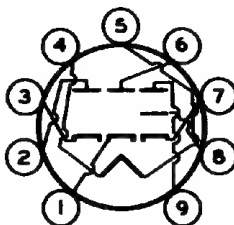
Harrison, N. J.

DATA  
5-62

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Basing Designation for BOTTOM VIEW. . . . . 9KR

Pin 1 - Diode-No.2  
Cathode  
Pin 2 - Diode-No.1  
Plate  
Pin 3 - Diode-No.1  
Cathode  
Pin 4 - Heater



Pin 5 - Heater  
Pin 6 - Diode-No.2  
Plate  
Pin 7 - Triode  
Cathode  
Pin 8 - Triode Grid  
Pin 9 - Triode Plate

## TRIODE UNIT — AMPLIFIER — Class A<sub>1</sub>

**Maximum Ratings, Design-Maximum Values:**

PLATE VOLTAGE. . . . . 330 max. volts  
GRID VOLTAGE:  
Positive-bias value. . . . . 0 max. volts  
PLATE DISSIPATION. . . . . 1.1 max. watts

## DIODE UNITS — Two

*Values are for Each Unit*

**Maximum Ratings, Design-Maximum Values:**

PLATE CURRENT. . . . . 5 max. ma

**Characteristics, Instantaneous Value:**

Plate Current for plate volts = 5. . . . . 18 ma

## SPECIAL RATINGS & PERFORMANCE DATA

### Heater-Cycling:

Cycles of Intermittent Operation . . . . . 2000 min. cycles

This test is performed on a sample lot of tubes from each production run under the following conditions: heater volts = 18.9 cycled one minute on and one minute off, heater 135 volts positive with respect to cathode, and all other elements connected to ground. At the end of this test, tubes are checked for heater-cathode shorts and open circuits.

### Transconductance at Reduced Heater Voltage (Triode Unit):

Average Value. . . . . 900  $\mu$ mhos

With heater volts = 10.8, plate volts = 250, and grid volts = -3.

<sup>a</sup> For satisfactory operation, it is recommended that the heater be operated within the voltage range of 12.0 to 15.0 volts.

<sup>b</sup> The dc component must not exceed 100 volts.

<sup>c</sup> Without external shield.

